

February 26, 2010

Mr. Robert V. Newman, CPA
Executive Director
Utah Retirement Systems
540 East 200 South
Salt Lake City, UT 84102-2099

**Re: Actuarial Analysis: SB 63 (3rd Sub.) – New Public Employees' Tier II
Contributory Retirement Act and New Public Safety and Firefighter
Tier II Contributory Retirement Act**

Dear Bob:

You asked for our actuarial analysis of the 3rd Substitute of SB 63 which is titled "New Public Employees' Tier II Contributory Retirement Act", and creates the New Public Employees' Tier II Contributory Retirement System and the New Public Safety and Firefighter Tier II Contributory Retirement System.

Provisions

SB 63 (3rd Sub.) would create two new URS retirement systems effective July 1, 2011. All employees of currently participating URS employers (except for judges) would go into one of the new Tier II systems if first hired on or after that date. This includes general employees of the State of Utah, teachers, other general employees of local governmental and educational units, public safety employees, firefighters, legislators, and the Governor. All employees first hired prior to July 1, 2011 would remain in the URS retirement system that currently covers them (one of the Tier I retirement systems). The proposed legislation has the following provisions.

1. Except as noted in Items 3 and 4, all non-uniformed employees first hired on or after July 1, 2011 would become a member of the New Public Employees' Tier II Contributory System and would make an irrevocable election between the following Tier II plans in that System:
 - a) Public Employees' Tier II Hybrid Retirement System
 - b) Public Employees' Tier II Defined Contribution Plan

The election would be made within 30 days of the initial employment date. These systems would cover those members who, if they had been hired before July 1, 2011, would have become members of the Public Employees' Retirement System (contributory or noncontributory) or the Legislative and Governors Plan.

2. All uniformed employees first hired on or after July 1, 2011 would become a member of the New Public Safety and Firefighter Tier II Contributory System and would make an irrevocable election between the following Tier II plans in that System:

- a) Public Safety and Firefighter Tier II Hybrid Retirement System

- b) Public Safety and Firefighter Tier II Defined Contribution Plan

The election would be made within 30 days of the initial employment date. These systems would cover those members who, if they had been hired before July 1, 2011, would have become members of the Public Safety Retirement System (contributory or noncontributory) or the Firefighters Retirement System.

3. Legislators and Governors who first become eligible for participation on or after July 1, 2011 would not make an election but would automatically become participants in the Tier II Defined Contribution Plan of the New Public Employees' Tier II Contributory System.
4. Judges hired on or after July 1, 2010 would continue to participate in the Tier I system.
5. As we interpret the bill, when an employee who was first hired prior to July 1, 2011 changes employers or transfers from a job covered under one of the Tier I systems to a job under a different system, he or she would be transferred to the new Tier I system, as at present. However, an employee elected to the legislature or governorship is required to participate in the Tier II Defined Contribution Plan while in office, even if previously covered under a Tier I retirement system or the Tier II Hybrid Retirement System.
6. Both of the new retirement systems (New Public Employees' Tier II Contributory Retirement System and New Public Safety and Firefighter Tier II Contributory Retirement System) are composed of both a defined benefit piece and a defined contribution piece. We have read the bill to create only one new fund for the employees in each of the defined benefit portions of the Tier II Contributory Retirement Systems. Therefore, costs for these plans would be determined on an aggregate basis for all participating employees and employers combined. In other words there would be one contribution rate for all employers whose employees participate in the New Public Employees' Tier II Contributory Retirement System and one contribution rate for all employers whose employees participate in the New Public Safety and Firefighter Tier II Contributory Retirement System.
7. The benefit provisions of the defined benefit plan in the New Public Employees' Tier II Hybrid Retirement System are loosely modeled on those in the Noncontributory Public Employees' Retirement System, but with some significant modifications:
 - a. The benefit multiplier will be 1.50%; hence the benefit formula will be equal to 1.50% multiplied by the member's years of service multiplied by the member's final average earnings. This contrasts with the 2.00% multiplier in the current public employee systems and with the higher multiplier in the judicial system.

- b. Unreduced retirement will be available at 35 years of service, rather than 30 years of service under the current Public Employee Retirement Systems. Unreduced retirement would also be available at age 65 as long as the member was vested (four years of service).
- c. Reduced retirement will be available to members who met one of these sets of requirements:
 - i. Age 62 with ten years of service
 - ii. Age 60 with twenty years of service

The Tier II defined benefit plan will not allow retirement prior to age 60 for members with 25 but less than 35 years of service. (The Noncontributory Public Employees' Retirement System allows members with 25 years of service to take a benefit at any age.)

- d. The reduction for reduced retirement benefits will be based on full actuarial cost, rather than a 3% reduction per year from age 65 to age 60.
 - e. The cost of living adjustment will be a maximum of 2.50% of the base benefit, contrasted with the 4.00% maximum COLA in most of the current systems.
 - f. The final average earnings will be determined over five years, contrasted with the three-year average used in the predecessor systems.
 - g. The final average earnings will use gross earnings. This is similar to the current definition in the Public Employees' Retirement Systems.
 - h. Post-retirement disability benefits under the Tier II defined benefit plan will be coordinated with the new unreduced retirement eligibilities.
 - i. Death benefits will be similar to those in the current Noncontributory Public Employees' Retirement System, adjusted for differences in the benefit eligibility requirements and the benefit multiplier.
8. The benefit provisions of the defined benefit plan in the New Public Safety and Firefighter Tier II Hybrid Retirement System are similar to those in the New Public Employees' Tier II Hybrid Retirement System except as described below:
- a. The benefit multiplier will be 1.50%; hence the benefit formula will be equal to 1.50% multiplied by the member's years of service multiplied by the member's final average earnings. This contrasts with the 2.50% multiplier for the first 20 years of service and 2.00% multiplier for the next 10 years of service in the current public safety and firefighter systems.
 - b. Unreduced retirement will be available at 25 years of service, rather than 20 years of service under the current Public Safety and Firefighter Systems. Unreduced retirement

would also be available at age 65 as long as the member was vested (four years of service).

- c. Reduced retirement will be available to members who met one of these sets of requirements:
 - i. Age 62 with ten years of service
 - ii. Age 60 with twenty years of service

Currently, Public Safety and Firefighter members age 60 with 10 years of service would be eligible for an unreduced retirement benefit. The reduction for reduced retirement benefits will be full actuarial cost.

- d. The final average earnings will be determined over five years, contrasted with the three-year average used in the current systems.
 - e. The final average salary will be based on base earnings. This is similar to the current definition in the current public safety and firefighter systems.
 - f. The Public Safety and Firefighter System also provides a Duty Death benefit. This benefit pays a monthly income of 30% of Final Average Salary to beneficiaries of members with less than 20 years of service and a monthly income equal to the member's accrued benefit for members with more than 20 years of service ($1.50\% \times \text{Final Average Salary} \times \text{service}$).
 - g. Members of this Public Safety and Firefighter Tier II System will be able to purchase up to five years of "air-time" service in order to meet eligibility for an unreduced retirement benefit. The rules governing the purchase of this service are similar to the current rules in the Public Employees systems.
9. We will not summarize the defined contribution provisions, since they are not relevant to the actuarial analysis.
10. The employer will contribute a total of 10.00% of pay to cover the costs of the new employees' benefits in the New Public Employees' Tier II Contributory Retirement System (12.0% of pay for new employees' in the New Public Safety and Firefighter Tier II Contributory Retirement System). For members of the new Tier II Hybrid Retirement Systems, the employer contributions (10.00% and 12.00% respectively) are intended to cover the costs of the Tier II defined benefit with any amount left over to be contributed to the Tier II Defined Contribution Plans on behalf of the employee. If the required contribution rate to the Tier II defined benefit plans is more than the employer contribution rate, the member would be required to contribute the remainder of the required contribution rate.

For members of the Tier II Defined Contribution Plan, the employer will contribute 10.00% (12.00% for Public Safety and Firefighters) of pay to the defined contribution plan on behalf of the employee.

In addition to this 10.00% base contribution rate (12.00% for Public Safety and Firefighters), employers will have to fund the "group insurance" death benefit that is provided by PEHP. Employers will also have to contribute to the defined contribution plan for Tier II employees who become disabled. These contributions would continue until the employee is eligible for retirement under the Tier II defined benefit provisions. (This is true even for members in the Tier II Defined Contribution Plan.)

11. In addition to the 10.00% of pay base contribution for the Tier II plan(s) (12.00% for Public Safety and Firefighters), the employer must make an additional contribution to the current URS retirement system under which the member would have been covered if the member had been hired prior to July 1, 2011. This additional contribution will be at the amortization rate calculated for the closed Tier I fund. This additional contribution does not apply to legislators and governors, since their Tier I plan is funded by legislative appropriations.
12. The bill also requires the Retirement Office to report the funded status of the URS Investment Fund to the Retirement and Independent Entities Committee at least annually. It also requires the Retirement Office to notify the Committee when the funded status of the URS Investment Fund reaches 100%. Upon that notification, the Committee will be required to conduct a study of participating employee compensation and benefits.

We would like to note that the funded status is usually determined annually as part of the actuarial valuation process. The funded status is composed of actuarial liabilities that are based on a snapshot of the retirement systems on a particular date (the valuation date) and of smoothed actuarial asset values. Therefore, determining the status on a more frequent basis or on a date other than the annual valuation date may require considerable time and effort.

Analysis

The cost for the New Public Employees Tier II defined benefit plan is 7.62% of payroll (10.46% for New Public Safety and Firefighters Tier II Hybrid Retirement Plan). That would leave 2.38% to go into the defined contribution plan for members of the New Public Employees Tier II Hybrid Retirement Plan (1.54% for the New Public Safety and Firefighters Tier II Hybrid Retirement Plan).

As members begin to join the Tier II Systems, URS employers will begin to see savings compared to what they would have paid if the current benefit structure had remained in place. Table 1 attached compares the scheduled employer contribution rates for FY 2011 under the current systems/funds with the contribution rates for Tier II employees. (We recognize that there will not be any Tier II employees until FY 2012, but this table illustrates the savings employers can expect.) We have shown the base contribution rate and the amortization contribution separately for the Tier II employees. Note that the contribution rates shown exclude the 1.50% 401(k) contribution and the group insurance death benefit cost, but rates include the charge for the 3% substantial substitute where applicable. The 3% substantial substitute charge is included in the amortization payment under Tier II.

If an employer in a contributory retirement system is currently paying the member's contribution (or a portion of it), then the savings will be larger than we have shown. Therefore, the negative savings shown for the Contributory Public Employees' Retirement System may in fact be positive

savings, if the employer is paying the member's contribution. The same is true for the Contributory Public Safety funds and Firefighters.

The rates shown in Column (2) are the rates certified by the Board of Trustees. For the Firefighters these are the net contribution rates after reflecting the offsets for fire insurance premium taxes. We have assumed that this revenue source—fire insurance premium taxes—will only be contributed to the Tier I retirement system. We have applied the offsets first to the amortization rate, then to the normal cost. As a result, these systems have no net amortization payment required. However, because the 12.00% Tier II contribution rate is larger than the Tier I net rates for the firefighter funds, SB 63 (3rd Sub.) may produce additional costs for Firefighters. As noted above, this will be dependent on whether and to what extent the employers pay the member contributions.

Because the effective date for new hires joining the Tier II system is July 1, 2011, the proposed legislation will not have a fiscal impact on fiscal year 2011. Employers will begin realizing savings in fiscal year 2012. We estimate that employers will contribute approximately \$3.9 million less in FY 2012 and \$10.2 million less in FY 2013 under the new Tier II Contributory Systems than they would have under the current URS benefit structures. As time goes by, the relative savings will increase.

Current Defined Benefit Systems

Employees in the current defined benefit systems will see no changes due to SB 63 (3rd Sub.), although these systems would be closed to new members. Because the employers of the Tier II employees would continue to pay the amortization contribution, there would be no impact on the funding of these closed plans. As an example, Exhibits 2 and 3 compare the projected contributions (column 4 of Exhibit 2 and column 9 of Exhibit 3) for the State and School Divisions with and without passage of SB 63 (3rd Sub.). The projected funded ratios are also shown on Exhibit 2. It should be noted that the contribution design of the Tier II Contributory System will produce the same pattern of funded ratio improvement in the Tier I retirement systems that would have occurred if no changes were made to URS.

GASB 25 Accounting Considerations

Currently, the amortization contributions in the Tier I plans are determined as a level percentage of payroll. Under Governmental Accounting Standards Board Statement No. 25, amortization contributions should be done on a level dollar basis once a plan is closed. We would recommend against changing the amortization approach, since the amortization contributions are still being paid on the payroll of an open and increasing group (all Tier I and Tier II members). However, this is an accounting issue, and the outside auditors for URS may disagree. In that case, the Board would have to decide whether to change the approach to a level-dollar amortization, which would increase the amortization payments, or leave the approach unchanged, in which case the State and other employers might have to report a shortfall between the actual contribution paid and the GASB ARC (Annual Required Contribution computed in accordance with the statement).

Basis of Calculations

Our calculations are based on the January 1, 2009 actuarial valuation, including member and financial data used for that valuation. Except for the retirement rates, we used the assumptions and methods used in that valuation to determine the cost of the new Tier II Systems. For all members of the Tier II Hybrid Retirement Systems we made changes to the expected retirement rates.

For the Public Employees we have added a 30% increase to the rates of retirement when a member first becomes eligible for an unreduced retirement benefit if that occurs prior to age 65, i.e., on reaching 35 years of service. (Because this is five years later than public employees can currently retire with an unreduced benefit, we expect increase demand when first eligible.) For Public Safety employees and Firefighters we have modified the rates used below age 60 to be equal to 60% of the rates we currently use for members with 30 years of service. We have also reduced the early retirement rates for public employees to account for the smaller benefits and larger early retirement reductions. Even though Public Safety and Firefighters will now be eligible for reduced retirement benefits we are assuming that all of these members will wait until they are eligible for unreduced retirement to retire.

All of the revised retirement rates are based on our judgment about how retirement behavior will be impacted by the new Tier II provisions. No experience will be available for many years.

To determine the cost of the Tier II defined benefit plan, we applied the Tier II provisions to a set of hypothetical new employees. These employees were distributed among the various employee classes—state employees, teachers, other local government employees, public safety employees, firefighters, etc.—based on data from new hires for the last five years. The distribution of these employees by age, sex and pay was also based on data for recent new entrants.

Other General Comments

Our calculations are based upon assumptions regarding future events, which may or may not materialize. Please bear in mind that actual results could deviate significantly from our projections, depending on actual plan experience.

Contribution rates are expected to increase in the future, due to the dramatic investment losses suffered in 2008. Because the actuarial value of assets phases these losses in over five years, contributions will continue to increase for some time, whether or not SB 63 (3rd Sub.) is enacted. SB 63 (3rd Sub.) produces savings, compared to the status quo, but employers should anticipate higher contributions regardless.

This letter is intended to describe the financial and actuarial effect of the proposed plan changes on the retirement systems only. There will most certainly be an impact on the cost of the post-retirement medical benefits as well, but we haven't tried to quantify this effect.

In the event that other changes are considered in addition to the change described herein, it is very important to remember that the results of separate actuarial valuations cannot generally be added

Mr. Robert V. Newman, CPA
February 26, 2010
Page 8

together to produce a correct estimate of the combined effect of all of the changes. The total savings might be less than the sum of the savings from several different proposals.

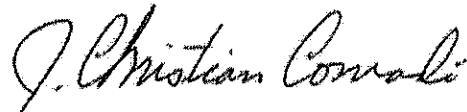
J. Christian Conradi is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. Nothing in this letter should be construed as providing legal, tax, or investment advice.

If you have any questions about the above information please do not hesitate to contact either of us.

Sincerely,



Lewis Ward
Consultant



J. Christian Conradi
Senior Consultant

Enclosures

cc: Mr. Todd Rupp
Mr. Daniel D. Andersen

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Utah Retirement Systems

Exhibit 1

System/Fund (1)	FY 2011 Employer Contribution Rate (2)	Tier II Contribution Rate		Total Rate (5)	Net Savings (6)
		Base Rate (3)	Amort. % (4)		
Public Employees Contributory					
Local Government	9.21%	10.00%	4.25%	14.25%	-5.04%
State and School	11.68%	10.00%	7.65%	17.65%	-5.97%
Public Employees Noncontributory					
Local Government	13.22%	10.00%	2.18%	12.18%	1.04%
State and School	16.17%	10.00%	4.45%	14.45%	1.72%
Public Safety Contributory					
State	21.45%	12.00%	9.85%	21.85%	-0.40%
Other Division A (2.5%)	14.57%	12.00%	4.49%	16.49%	-1.92%
Other Division A (4%)	18.10%	12.00%	6.45%	18.45%	-0.35%
Logan	20.69%	12.00%	9.99%	21.99%	-1.30%
Other Division A (2.5%)	18.83%	12.00%	6.64%	18.64%	0.19%
Other Division A (4%)	23.04%	12.00%	10.18%	22.18%	0.86%
Public Safety Noncontributory					
State	32.48%	12.00%	9.85%	21.85%	10.63%
Other Division A (2.5%)	25.83%	12.00%	4.49%	16.49%	9.34%
Other Division A (4%)	28.55%	12.00%	6.45%	18.45%	10.10%
Salt Lake City	35.71%	12.00%	14.27%	26.27%	9.44%
Ogden	34.52%	12.00%	13.06%	25.06%	9.46%
Provo	32.70%	12.00%	11.11%	23.11%	9.59%
Logan	31.24%	12.00%	9.99%	21.99%	9.25%
Bountiful	27.25%	12.00%	5.70%	17.70%	9.55%
Other Division A (2.5%)	28.06%	12.00%	6.64%	18.64%	9.42%
Other Division A (4%)	32.52%	12.00%	10.18%	22.18%	10.34%
Firefighters					
Division A	1.08%	12.00%	0.00%	12.00%	-10.92%
Division B	0.00%	12.00%	0.00%	12.00%	-12.00%

Utah Retirement System - State & School Divisions, Contributory & Noncontributory Combined

Projection of Key Actuarial Results, Based on Jan. 1, 2009 Actuarial Valuation

Exhibit 2 (Baseline)

Contributions: Calculated under Current Methodology

Investment Returns: 7.75% in 2009 and each year thereafter

Contributions by Fiscal Year Ending June 30				Actuarial Information at January 1 Valuation Date			
Fiscal Year	Employer Contribution Rate	Employer Contribution (\$ Millions)	GASB ARC	Year	Market Value of Assets (\$ Millions)	Unfunded Actuarial Accrued Liability (\$ Millions)	Funded Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FY 2010	13.25%	417.8	13.25%	2008	14,467.3	511.2	96.5%
FY 2011	15.39%	499.0	15.39%	2009	10,930.1	1,893.0	87.8%
FY 2012	16.23%	541.6	16.23%	2010	11,495.7	2,326.1	85.8%
FY 2013	18.24%	626.7	18.24%	2011	12,168.3	3,366.0	80.6%
FY 2014	20.55%	727.2	20.55%	2012	12,853.3	4,563.3	75.1%
FY 2015	22.75%	829.6	22.75%	2013	13,584.7	5,687.2	70.5%
FY 2020	23.10%	987.7	21.97%	2018	18,238.1	5,969.7	75.3%
FY 2025	23.10%	1,178.0	19.94%	2023	23,638.5	5,679.9	80.6%
FY 2030	23.10%	1,419.4	17.35%	2028	30,118.3	4,679.7	86.6%
FY 2035	23.10%	1,717.7	14.20%	2033	38,514.4	2,494.3	93.9%
FY 2040	23.10%	2,080.5	10.42%	2038	50,007.0	(1,584.2)	103.3%
FY 2045	11.72%	1,281.4	5.89%	2043	66,021.7	(8,609.2)	115.0%
FY 2050	11.72%	1,558.1	4.29%	2048	81,732.4	(13,325.5)	119.5%

Gabriel Roeder Smith & Company

Utah Retirement System - State & School Divisions, Contributory & Noncontributory Combined

Projection of Key Actuarial Results, Based on Jan. 1, 2009 Actuarial Valuation

Exhibit 3(Tier II Contributory System for New Hires)

Contributions: Calculated under Current Methodology

Investment Returns: 7.75% in 2009 and each year thereafter

Fiscal Year	Current DB Plan, Closed		Amortization Payment - Future Hires		New Plan for Future Hires			Total	
	Employer Contribution Rate (2)	Employer Contribution (\$ Millions) (3)	Employer Contribution Rate (4)	Employer Contribution (\$ Millions) (5)	Employer Contribution Rate (6)	Employer Contribution (\$ Millions) (7)	Employer Contribution (\$ Millions) (8)	Average Contribution Rate (9)	
FY 2010	13.25%	417.82	NA	-	NA	-	417.82	13.25%	
FY 2011	15.39%	498.96	NA	-	NA	-	498.96	15.39%	
FY 2012	16.23%	521.57	4.51%	5.55	10.00%	12.31	539.43	16.17%	
FY 2013	18.24%	561.23	6.52%	23.39	10.00%	35.88	620.50	18.06%	
FY 2014	20.54%	607.90	8.82%	51.08	10.00%	57.92	716.90	20.26%	
FY 2015	22.73%	648.56	11.01%	87.32	10.00%	79.31	815.19	22.36%	
FY 2020	23.09%	544.50	11.37%	218.03	10.00%	191.76	954.29	22.32%	
FY 2025	23.09%	428.78	11.37%	368.68	10.00%	324.26	1,121.72	22.00%	
FY 2030	23.09%	316.45	11.37%	542.82	10.00%	477.41	1,336.68	21.75%	
FY 2035	23.09%	204.70	11.37%	744.65	10.00%	654.93	1,604.28	21.58%	
FY 2040	23.09%	88.90	11.37%	980.26	10.00%	862.15	1,931.31	21.44%	
FY 2045	11.72%	7.62	0.00%	-	10.00%	1,086.87	1,094.49	10.01%	
FY 2050	11.72%	0.71	0.00%	-	10.00%	1,328.86	1,329.57	10.00%	

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